

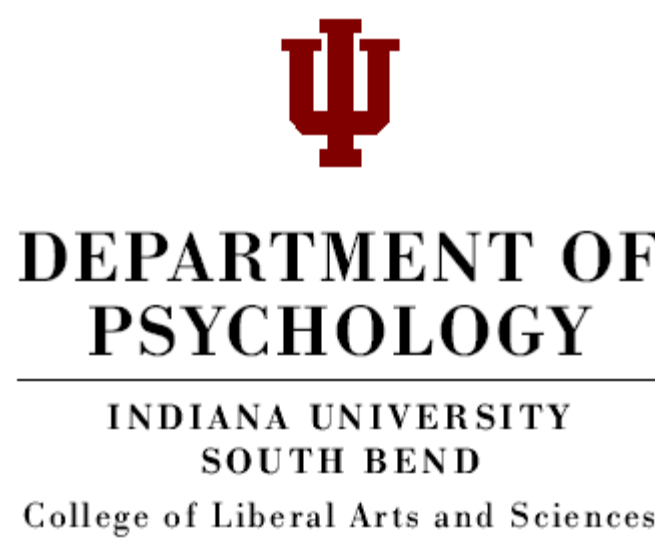
To SAFMEDS or not to SAFMEDS? A student compares two methods to learn vocabulary terms in an undergraduate course in applied behavior analysis

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Introduction

Key aspects of learning are acquisition and retention. Speed and accuracy, or together, fluency - the term used in Precision Teaching, can be measured as evidence of learning. (Stockwell & Eshleman, 2010).

Say All Fast a Minute Every Day Shuffling (SAFMEDS) is a Precision Teaching tool especially used for behavioral fluency, in use since the 1970s when it was developed by Ogden Lindsley (Stockwell & Eshelman, 2010). SAFMEDS is used similarly to traditional flashcards. However, with SAFMEDS, unlike traditional flashcards, speed and accuracy are taken into account with a singular daily one-minute timing period rather than packing hours of study within varied intervals before test taking. These timings allow us to view the data in a methodical way. Precision Teaching is present in some of the empirical literature but there is not a large amount specifically on the effects of SAFMEDS (Fodrocy, Frieder, & Quigley 2013).

Research shows there is a difference between groups using SAFMEDS cards and groups that are taught in a control, or “treatment-as-usual” category (Beverly, Hughes, & Hastings, 2009; Hughes, Beverly, & Whitehead, 2007). Other research shows general but significant trends in the positive effects of precision teaching techniques (Casey, McLaughlin, & Weber, 2003; Stump, Lovitt, & Fister, 1992). Some research considered the effects of different stimuli on the effectiveness of SAFMEDS, including but not limited to altering the look or style of the writing on SAFMEDS cards. Fodrocy (2013) studied the difference in fluency during the tests with the SAFMEDS cards between handwritten and pre-printed cards. Results demonstrated that changing the type of stimulus (handwritten vs. printed) initially decreased fluency, but fluent responding recovered and the decreasing effects lessened after multiple changes took place.

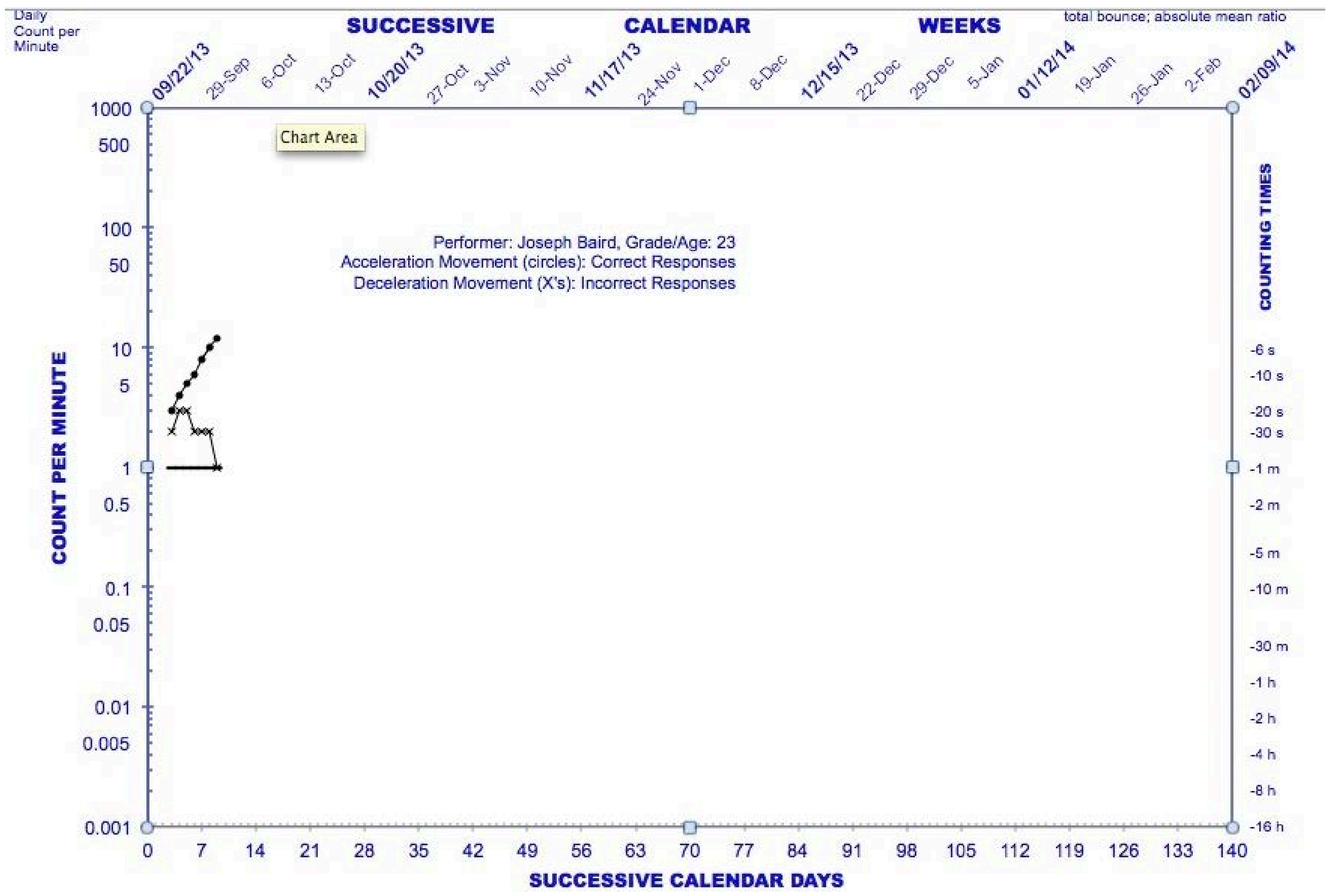
Method

In the current study, a college student taking a class on Learning assessed the use of SAFMEDS as a study tool for vocabulary. All study scenarios took place near the sleep space in the student’s home and close to bedtime. A college professor at the university proctored the vocabulary quiz at the end of the experiment, in a satellite office.

Thirty vocabulary words were chosen, at random, from two upcoming chapters that were not yet reviewed in class. Fifteen words from the first chapter were handwritten onto three-by-five notecards with their definitions on the back. The second set of fifteen words and definitions were typed into a word processing program using a standard font size and type. The first group, or SAFMEDS group, was studied for one minute a day at waking time for seven consecutive days. A correct response was counted for vocally reading and stating the correct definition of the word. An incorrect response was anything other than the correct definition. The second group was studied independently before bed for five to ten minutes (untimed), until all words and definitions were read aloud each night, for the last four nights of the study period.

As a measure of accuracy and learning, the SAFMEDS group had positive and negative responses recorded on an excel version of the Standard Celeration Chart, with a record floor of one-minute per session. Additionally, there is evidence that speed increased as only five responses occurred in the initial study session with an increase to thirteen at the ends of seven days. At the end of the week, the student took a quiz, ten minutes in length, presented by the class professor, with both lists of words combined and presented in alphabetical order for randomization.

Results



The score of this quiz indicated that both methods produced in the same number of correct and incorrect responses; twelve correct answers and three incorrect answers for each group of words studied. The interesting aspect of this outcome was the time spent studying compared to the outcomes; equal results can be achieved with significantly less study time; something that can be very valuable to a college student.

Discussion

The results of this study may suggest SAFMEDS could be a superior method of study for college students. Similarly, Beverly (2009) used SAFMEDS to learn psychology statistics concepts and there is evidence that SAFMEDS is a successful aspect of Precision Teaching for young students, students with learning disabilities, and in older groups such as college students (Casey, McLaughlin, & Weber, 2003; Stump, Lovitt, & Fister, 1992).

Having more participants, more vocabulary words, and a longer period of study could enhance this experiment. People respond differently to different methods of study and some of this natural variation could become more apparent with multiple subjects to compare. Additionally, fifteen cards per condition imposed a ceiling and maximum number of answers, whereas a larger word pool could yield different results.

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Stockwell, F., & Eshlelman, J. (2010). A Case Study Using SAFMEDS to Promote Fluency with Skinner's Verbal Behavior Terms. *Journal of Precision Teaching and Celeration*, 26, 33-40.
Stump, C. S., Lovitt, T. C., Fister, S., Kemp, K., Moore, R., & Schroeder, B. (1992). Vocabulary intervention for secondary-level youth. *Learning Disability Quarterly*, 207-222.